

# 3512C

## MARINE AUXILIARY ENGINE & DEP ENGINE

Auxiliary	1821 bkW	1730 ekW
DEP	1821 bkW	1730 ekW



Image shown may not reflect actual engine



### COMPLETE SOLUTIONS FOR YOUR MARINE APPLICATION

- Single-source for support and service
- Industry-leading warranty coverage for factory packaged components
- Global dealer network for service in any location

### EFFICIENT OPERATION

- Instrument panel with cold mode start strategy and programmable low idle
- Electronic governing control unit minimizes fuel consumption and monitors engine operating parameters
- Optional alarm and protection system

### IMPROVED PERFORMANCE AND FUNCTION

- Advanced combustion design uses the optimum configurations and cylinder geometry
- Enhanced control of fuel injection optimized through crank timing

### ENVIRONMENTALLY CONSCIOUS

- Closed crankcase ventilation system and redesigned piston for improved efficiency and lower emissions
- Optimal nozzle geometry and electronic injection control for improved fuel delivery
- EPA Marine Tier 3/IMO Tier II Emissions Compliant

### SPECIFICATIONS

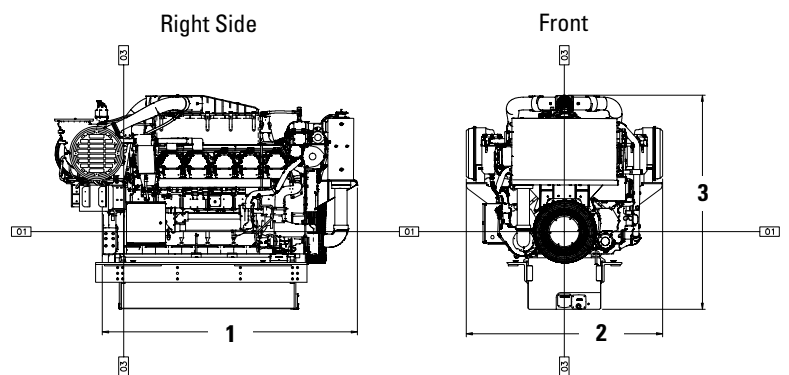
#### V-12, 4-Stroke-Cycle-Diesel

- EPA Marine Tier 3 compliant
- IMO Tier II emissions compliant
- 58.56 L (3574 in<sup>3</sup>) displacement
- 1800 rpm
- 170 mm (6.69 in) bore x 215 mm (8.46 in) stroke
- Turbocharged-aftercooled aspiration
- Electronically governed A4 ECU
- Heat exchanger or keel cooled
- Refill capacity
  - Lube oil system: 613.2 L (162 gal)
- 1000-hour oil change interval
- Counterclockwise rotation
- SAE No. 00 flywheel and flywheel housing (183 teeth)
- Engine diagnostic system data link messaging

All new 3500C marine EPA Tier 3 capable engines, including both propulsion and auxiliary units, will be required to use a maximum concentration of 20% glycol mixture in the aftercooler circuit. This restriction applies equally to both heat exchanger cooled and keel cooled configurations (box coolers). In the event that specific project needs require higher levels of freeze protection, (lower freeze temperature), please contact ASC to review the specific engine rating and glycol concentration desired.

The jacket water circuit will continue to be capable of operation up to 50% glycol.

### DIMENSIONS



#### ENGINE DIMENSIONS & WEIGHT

<b>(1) Length to Flywheel Housing</b>	3232 mm	127.2 in
<b>(2) Width</b>	2160 mm	85.0 in
<b>(3) Height</b>	2205 mm	86.8 in
<b>Weight, Net Dry (approx)</b>	7886 kg	17,386 lb

Note: Do not use these dimensions for installation design. See general dimension drawings for detail (Drawing #420-1879). For complete information, please refer to the Marine Spec Sheet Wizard.

### MARINE ENGINE PERFORMANCE

% Load	Auxiliary				DEP			
	bhp	bkW	g/hr	g/bkW-hr	bhp	bkW	g/hr	g/bkW-hr
100	2442	1821	118.7	206.9	2442	1821	119.2	207.9
75	1832	1366	93.9	218.3	1832	1366	93.7	218.0
50	1221	911	65.3	227.6	1221	911	64.5	224.9
25	611	455	34.3	239.4	611	455	34.9	243.5
10	244	182	19.0	331.3	244	182	19.0	332.0

#### STANDARD ENGINE EQUIPMENT

- Corrosion-resistant aftercooler core
- Dual A4 engine control modules w/electronic unit injector fuel system
- Dual turbochargers with water-cooled bearings and heat shields
- Vibration damper and guard
- Closed crankcase ventilation system
- Thermostats and housing
- Electronically cooled unit injectors
- Engine oil cooler and oil filler
- Auxiliary fresh water pump
- Gear-driven, centrifugal jacket water pump
- Oil filter, oil level gauge, and oil pump

#### OPTIONAL ATTACHMENTS

- Plate-type heat exchanger
- Special appearance packages with chrome cover
- Marine society certifications
- Power takeoff
- Shutoff and alarm contactors
- SOLAS compliant fuel connections with spill shield
- Instrument panel with color Marine Power Display (MPD)
- Mounting rails
- Sea water pump
- See Marine Price List for additional attachments

### RATING DEFINITIONS AND CONDITIONS

#### Rating Definition

For all vessels operating with generator sets that provide power to the propulsions systems. All ratings are Prime Ratings according to ISO8528-1 for unlimited usage per year at a load factor of  $\leq 70\%$ . 10% overload capability is required for a maximum of 1 hour out of every 12 and a maximum of 25 hours total per year.

#### Rating Conditions

Ratings are based on SAE J3046 and J1349 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO8665, ISO3046-1:2002E, DIN6271-3, and BS5514 standard conditions of 100 kPa (29.61 in Hg), 27°C (81°F), and 60% relative humidity.

Fuel rates are based on fuel oil of 35 API [16°C (60°F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

Marine auxiliary engines are mainly used as generator set engines; however, they can be used for electrically driven pumps, winches, conveyors, and thrusters, when it is specified. Engines can be radiator cooled or heat exchanger/keel cooled. Typical applications of DEP engines could include but are not limited to supply vessels, cruise vessels, research vessels, or any other ship using diesel electric drive systems.